

Druce tells me that it has already received a name; but I can find no published description of it, although I have gone carefully through the Records.

Herpœnia tritogenia, Klug.

This and the preceding species are evidently not rare in Abyssinia. *H. eriphia*, which I have examined from Angola, is a larger and more creamy-coloured species than *H. tritogenia* (with which it has been united). I think the two forms will prove to be perfectly distinct: the markings are not quite the same on the hind wings.

Hesperiidæ.

Pamphila inconspicua, Bertoloni.

Pyrgus (close to *P. galba*).

Thanaos (two species near *T. Motozi*, Wlgr.).

Tagiades (very near to *T. fesus*, Fabr.).

The Hesperiidæ require figures to distinguish them readily from species already described, to which they are nearly allied.

XLIX.—*New and peculiar Mollusca of the Kellia, Lucina, Cyprina, and Corbula Families procured in the 'Valorous' Expedition.* By J. GWYN JEFFREYS, LL.D., F.R.S.

Kelliidæ.

Montacuta Dawsoni, Jeffr.

Montacuta Dawsoni, British Conchology, vol. ii. p. 216; vol. v. p. 178, pl. xxi. f. 27.

Godhavn, Disco, 5–25 fms.; Station 4, 20 fms.; St. 5, 57 fms.; Holsteinborg, 3–35 fms.; St. 9, 1750 fms.; Greenland (coll. Möller, in Mus. Reg., Copenhagen): Dröbak (J. G. J.): Florö, Norway, 300 fms. (Friele): 'Porcupine' Expedition, 1870, off Cape Sagres, in the Bay of Biscay; a valve only: Palermo (Monterosato).

BODY whitish and gelatinous: *mantle* plain-edged, although at first I thought the edges were ciliated, in consequence of the posterior side of the shell being fringed by the polyparies of a minute Hydrozoon; the incurrent opening is wide and not tubular.

This is probably the unnamed bivalve No. 8 in Möller's Index, p. 24.

My description and figure were taken from dead specimens which the late Mr. Robert Dawson of Cruden dredged in the Moray Firth; but these may be semifossil or relics of the glacial epoch, like *Pecten islandicus*, *Astarte depressa* (*A. cribricostata*, Forbes, = *A. Richardsoni*, Reeve), *Tellina calcaria*, and several other arctic shells which have been dredged on the coasts of Scotland. In St.-Magnus Bay, Shetland, I dredged *Leda pernula*, *L. abyssicola*, and *L. frigida* (= *Yoldia nana*, Sars) in a fresh state; and I also dredged *L. arctica* (= *Nucula truncata*, Brown, = *N. portlandica*, Hitchcock, = *N. siliqua* and *N. sulcifera*, Reeve) among the Hebrides. It is very difficult to say whether some of the above do not at present inhabit our northern seas.

*Kellia symmetros**, Jeffr.

SHELL triangularly oval, equilateral, compressed but not flat, transparent, and glossy: *sculpture*, none except microscopic and slight lines of growth: *colour* glassy or clear white: *margins* sloping equally from the beaks, rounded on each side, gently curved in front: *beaks* circular or calyciform, prominent, incurved but straight: *cartilage* small, triangular, placed between the hinge-line and lateral tooth on the posterior side: *hinge-line* obtuse-angled: *hinge-plate* narrow but strong: *teeth*, in the right valve two short laminar laterals; in the left valve a strong oblique and projecting cardinal and two laterals; one of the laterals in each valve is slight: *inside* pit-marked: *scars* indistinct. L. 0.04. B. 0.05.

Station 9, 1750 fms.; a single living specimen.

The very young of *K. suborbicularis* of the same size as this is more globular; its beaks are not prominent; and the teeth are different.

Axinus cycladius, S. V. Wood.

Kellia cycladia, Mon. Crag Moll. p. 122, tab. xi. f. 4 a, b.

Poromya subtrigona, Jeffr. Ann. & Mag. Nat. Hist. 3rd ser. Jan. 1858, p. 42, pl. ii. f. 1.

Kellia? *cycladia*, British Conchology, vol. i. p. 228; vol. v. p. 179, pl. xxxii. f. 3.

Station 9, 1750 fms.; one living specimen. Shetland, 60-90 fms. (J. G. J.). 'Porcupine' Expedition, 1869, off the north-western coast of Ireland, 1366 fms.; 1870, Bay of Biscay, 386 fms. Mediterranean, 30-120 fms. (Spratt, Acton, Nares, Carpenter, and Monterosato)!

* Symmetrical.

Fossil in the Coralline Crag of Suffolk.

The 'Valorous' specimen differs somewhat from others. It is more gibbous, its contour is not so oblique, and the hinge-line is nearly straight instead of curved: the cartilage is oblong and placed obliquely. The hinge shows that this shell belongs to *Axinus* and not to *Kellia*.

Axinus eumyarius, M. Sars.

Axinus eumyarius, M. Sars, Christianiafjordens Fauna, ii. 1870 (posthumous), p. 87, tab. xii. f. 7-10.

Station 7, 1100 fms.; one live specimen. Norway, 200-450 fms. (Sars). 'Porcupine' Expedition, 1870, Bay of Biscay, 227-795 fms.; Mediterranean, 1456 fms. Palermo (Monterosato).

This species is remarkable for the length and thickness of the adductor muscles, the scars of which are visible through the shell. It somewhat resembles in shape *A. croulinensis*, but is longer and not oblique, and the beaks are pointed and project much more, so that there is a sloping droop on each side. In some of the 'Porcupine' specimens the muscular scars are less distinct, although the other characters are the same.

*Axinus incrassatus**, Jeffr.

SHELL more or less obliquely triangular, moderately convex, rather solid, and nearly opaque: *sculpture*, minute concentric striæ or lines of growth, which become fewer and regular in front: *colour* whitish: *epidermis* filmy: *margins* sloping and curved on the anterior side, rounded in front, and truncate on the posterior side: *lunule* and *corselet* indistinct: *ligament* narrow and yellowish, visible outside: *hinge-line* obtuse-angled: *hinge-plate* remarkably thick on both sides of the beak, so as to resemble laminar lateral teeth: *inside* glossy, smooth-edged: *scars* inconspicuous. L. 0.05. B. 0.075.

Station 9, 1750 fms.; 12, 1450 fms.; 16, 1785 fms. 'Porcupine' Expedition, off the north-west of Ireland, 1180 fms.

A variety which I would name *succisa* was dredged by me in the 'Porcupine' Expeditions of 1869 and 1870 in the North Atlantic and Mediterranean, at depths of 92-1366 fathoms, and by Dr. Carpenter in the 'Shearwater' Expedition of 1871, off the coast of Tunis, at depths of 40-120 fathoms. In this variety the posterior side is more abruptly truncate in the middle, and the hinge-plate is reflected or folded back on that side instead of being excessively thick. Specimens from moderate depths are larger than the type.

* Thickened.

The triangular shape (owing to the truncature of the posterior side), as well as the peculiar hinge-plate, will serve to distinguish this species from *A. croulinensis* and the young of *A. flexuosus*.

Lucinidæ.

*Diplodonta Torelli**, Jeffr.

SHELL roundish-oval, inequilateral, with an oblique outline, moderately convex but compressed, rather solid, opaque, of a dull hue: *sculpture*, numerous close-set but irregular concentric striae, which are sometimes confluent, besides occasional marks of growth: *colour* chalky: *epidermis* thin, yellowish-brown: *margins* rounded on the anterior side, gently curved in front, rounded and expanded on the posterior side, and sloping gradually at the back from the beaks to the extent of about one fifth of the circumference: *beaks* small, somewhat recurved towards the anterior side: *lumule* small, triangular: *ligament* rather long, brownish-yellow; groove deep: *hinge-line* slightly curved: *hinge-plate* long, broad, and thick, tapering towards each end, placed mostly on the posterior side: *teeth*, in each valve two laminar cardinals (one of which is bifid or double, as in *D. rotundata*), a ridge-like lateral on the posterior side, and a smaller and inconspicuous lateral on the other side: *inside* frosted: *pallial and muscular scars* as in *D. rotundata*. L. 1. B. 1.1.

Station 12, 1450 fms.; fragments only. Spitzbergen (Torell).

I have described this species chiefly from a Spitzbergen specimen, which my friend Professor Torell kindly gave me at Lund. It is not gibbous like *D. rotundata*, broader in proportion to the length, and differently sculptured.

Cyprinidæ.

Isocardia cor, Linné.

The fry or very young of this well-known species occurred living at Station 12, 1456 fms., and at Station 16, 1785 fms. In this stage of growth it has a wide distribution in the North Atlantic, from the Loföden Isles to the Azores, at depths of from 50 to 1785 fathoms, and in the Mediterranean from 40 to 1456 fathoms. It literally swarms in Christianiafiord. Full-grown specimens are comparatively rare, because the habit of burrowing in mud prevents their being easily procured by means of the dredge or trawl. I have a series of various

* Named in honour of the discoverer, Professor Torell.

sizes, from half a line to an inch in diameter, which I dredged in the 'Porcupine' Expedition, off the north-west of Ireland, at depths of 1230 and 1630 fathoms. A very young living specimen of *Cyprina Islandica* I got in the same locality in 808 fathoms.

The fry of *I. cor* was described by Professor Edward Forbes as *Kellia abyssicola*, by Dr. Philippi as *Venus? miliaris*, and by Professor M. Sars as *Kelliella abyssicola*.

Corbulidæ.

*Poromya rotundata**, Jeffr.

SHELL convex, not very thin, nearly circular except at the upper part of the posterior side, where there is a blunt angle, formed by the junction of the dorsal side with that part, white, covered with numerous minute and close-set tubercles, which are arranged in longitudinal rows. The hinge is wanting. Inside glossy.

Station 12, 1450 fms.; an imperfect valve.

Pecchiolia abyssicola, M. Sars.

Lyonsiella abyssicola, M. Sars, Vid.-Selsk. Forh. 1868, p. 257.

Pecchiolia abyssicola, G. O. Sars, 'On some remarkable Forms of Animal Life from the great deeps of the Norwegian coast,' i. p. 25, pl. iii. f. 21-43.

Station 12, 1450 fms.; a fragment only. Loffoden Isles, 200-300 fms. (G. O. Sars). Bergen (Koren). Greenland (Mus. Copenhagen). Davis Strait, 200 fms. (Lindahl). 'Porcupine' Expedition, 1870, chops of the English Channel, 567 fms.; coast of Portugal, 740-1095 fms.

Pecchiolia gibbosa†, Jeffr.

SHELL rather solid, obliquely raised and truncated on the posterior side, of a dark brownish colour, covered with numerous minute and close-set tubercles, which are irregularly disposed; inner layer and surface of the inside nacreous.

Station 12, 1450 fms.; a fragment only.

Pecchiolia tornata‡, Jeffr.

SHELL, although represented by several fragments, must have been rounded, and larger than any known living species except *P. acuticostata*. The present species, however, has no ribs, but merely minute and irregularly scattered tubercles. It is

* Rounded.

† Irregularly hunchbacked.

‡ Rounded off.

of a thin texture, and covered with a cream-coloured epidermis, which is marked by occasional lines of growth. The beak is comparatively small and convoluted, turning towards the anterior side. The tooth in the right valve is short and strong, and placed obliquely. Inside silvery and resplendent.

Station 16, 1785 fms.; fragments.

*Neera striata**, Jeffr.

SHELL forming a short oblong, moderately convex but not globose, thin, opaque, rather glossy: *sculpture*, from 30 to 40 longitudinal ribs or striae, which radiate from the beak in each valve, besides a few intermediate and finer striae; otherwise they are all nearly equal in size; in some specimens the space between the beak-like end of the posterior side and the main part of the shell is wrinkled transversely; the surface is also marked with numerous and close-set minute concentric lines in the interstices of the ribs or striae: *colour* white: *margins* obliquely curved in front, rounded on the anterior side, nearly straight behind, and produced or extended on the posterior side into a rather long rostral or beak-like projection (rounded at the extremity), below which is a more or less distinct indentation: *beaks* small, incurved; umbones prominent, and projecting beyond the dorsal margin: *cartilage* contained in a small oval cavity underneath the beaks: *hinge-line* straight, or slightly upturned on the posterior side: *hinge-plate* narrow and slight: *teeth*, only a long triangular and erect lateral on the posterior side of the right valve, being a continuation or prolongation of the cartilage-pit to which it is united: *inside* glossy: *muscular scars* inconspicuous. L. 0·3. B. 0·5.

Station 12, 1450 fms.; 13, 690 fms.: altogether three single valves and several fragments. 'Challenger' Expedition, off Bermuda, 435 fms.

This differs from *N. costellata* in being much larger, having more numerous and regular ribs or striae, which sometimes alternate in size, but are not stronger on the posterior side, and in the dorsal margin being nearly straight; from an undescribed species dredged in the 'Porcupine' and 'Josephine' Expeditions (which I propose to name *curta*) in not being globose, in having a longer rostral point, and also in the dorsal margin being nearly straight instead of excavated and lying below the hinge-line on the posterior side. In the last-mentioned species, as well as in *N. costellata*, the ribs are markedly stronger on that side, and are throughout unequal in size, and variable according to the specimens. The present

* Striated.

is quite distinct from any of the allied species described and figured by Mr. Hinds in the 'Zoology of the Voyage of the 'Sulphur,' and from those described by him in the 'Proceedings of the Zoological Society' for 1843.

Some of the 'Valorous' fragments indicate a size of half an inch in length by three quarters of an inch in breadth.

A fragment of another species of *Neæra* occurred at Station 13, in 690 fathoms. It represents a specimen apparently nearly an inch broad and more than half an inch long. It has a rather compressed shape, is strongly wrinkled concentrically, and the rostral extremity is defined by two keels. The indentation below the rostrum is well marked. It probably belongs to a species which I dredged in the 'Porcupine' Expedition of 1870, off the coast of Portugal, at depths of from 740 to 1095 fathoms, and which I propose to name *bicarinata*.

I have also an undetermined fragment (part of the hinge of a right valve) of another smooth species from Station 12, 1450 fathoms, which shows a large cartilage-pit and an elongated triangular lateral tooth.

*Neæra exigua**, Jeffr.

SHELL oval, globose, thin, semitransparent, and glossy: *sculpture*, none except in front, where are some slight and close-set concentric striæ: *colour* whitish: *margins* gently curved in front, rounded on the anterior side, incurved behind on the posterior side, with a short and abrupt beak-like extremity on that side, which has scarcely any indentation below: *beaks* very small and mamillar, incurved towards the anterior side; umbones prominent, and projecting behind: *cartilage* and pit small, triangular: *hinge-line* slightly rounded on the anterior, and incurved on the posterior side: *hinge-plate* slight, folded back on the anterior side: *teeth*, a rather short triangular lateral on the posterior side of the right valve: *inside* glossy and stippled, showing under the microscope traces of longitudinal striæ: *scars* inconspicuous. L. 0·125. B. 0·2.

Station 12, 1450 fms.; a few valves and fragments.

This species differs from the young of *N. obesa*, Lovén, in being more convex and proportionally shorter, the front margin is more rounded, the rostral point is more abrupt, the ventral sinus (or indentation on the lower side of the rostrum) is scarcely perceptible, and the dorsal slope is more curved. *N. subtorta*, G. O. Sars, MS., from Norway and Spitzbergen, is shorter and twisted.

* Small.

*Neera notabilis**, Jeffr.

SHELL oval, convex, thin, opaque, somewhat glossy: *sculpture*, none in the umbonal region (which is quite smooth), but on the anterior side and in front are about 30 fine concentric and equidistant lamellar ridges or striae; the rostrum on the posterior side is defined by two keels, the lower one slanting and the upper flexuous; the posterior side is transversely wrinkled in a fibrous manner; the whole surface appears, under a microscope, to be covered with minute and close-set striae, which run parallel to the ridges and obliquely on the posterior side: *colour* white: *margins* rounded on the anterior side and in front, indented under the rostrum, which is rather short and gently curved at the point, straight behind: *beaks* small, incurved towards the anterior side; umbones prominent: *cartilage* narrow; pit or receptacle sunk under the beaks: *hinge-line* nearly straight, except where it is interrupted by the beaks: *hinge-plate* narrow and slight; slightly folded back on the upper part of the anterior side in the left valve: *teeth*, a lateral one on each side in the right valve, both of which laterals are triangular and erect near the beak, and thin off as ridges towards either side: *inside* glossy, exhibiting the impression of the rostral keels: *scars* indistinct. L. 0·2. B. 0·35.

Station 12, 1450 fms.; two valves and fragments. Some of the fragments show that this species attains a larger size than that given in the description.

Neera circinata†, Jeffr.

SHELL roundish-oval, obliquely twisted towards the posterior side, convex, rather solid, opaque, and of a dull hue: *sculpture*, scarcely any in the umbonal region, about 25 fine concentric and equidistant lamellar ridges or striae in the middle of the shell, which become confluent in front and disappear at the sides; the rostrum has two keels (as in the last species), which radiate from the beak; the posterior side is also wrinkled transversely; between the ridges are minute but not numerous concentric striae: *margins* rounded on the anterior side, sloping with a gentle curve in front (the curve being greatest towards the posterior side), indented at the commencement of the rostrum, straight behind, and somewhat upturned at the posterior end; rostrum triangular, with a curved slope downwards: *beaks* as in other species; umbones not so prominent as in the last: *cartilage* oval; pit not much sunk below the beaks: *hinge-line* nearly straight, but (viewed

* Remarkable.

† Rounded.

from the inside) slightly incurved on the posterior side: *hinge-plate* thin, broader on the anterior side: *teeth* consisting of a single lateral on the posterior side in the right valve; this is rather long, triangular, and erect: *inside* glossy: *muscular scar* on the posterior side below the hinge-line triangular and strongly marked, the other scars inconspicuous. L. 0.5. B. 0.75.

Station 12, 1450 fms.; a valve and fragments. 'Porcupine' Expedition, 1870, off the coast of Portugal, 994 fms.; a small valve.

This differs from *N. notabilis* in shape and sculpture, as well as in having only a single lateral tooth. An imperfect valve represents a specimen an inch broad. The perfect valve and portion of a larger one have been drilled by apparently some small Siphonobranchiate mollusk.

*Nœra papyria**, Jeffr.

SHELL oval, convex, exceedingly thin and fragile, semi-transparent, rather glossy: *sculpture*, none on the umbones; from 15 to 20 concentric lamellar ridges on the body of the shell, besides numerous and close-set but irregular minute hair-like striæ in the interstices of the ridges; the rostral part on the posterior side is closely striated across, and marked lengthwise with three or four slight rib-like striæ: *colour* white: *margins* rounded on the anterior side and in front, sloping towards the rostrum, which is snout-like and rounded at its extremity, incurved and somewhat upturned behind: *beaks* as in other species; umbones prominent: *cartilage* and pit or receptacle oblong, placed obliquely under the hinge-plate on the posterior side of the beaks: *hinge-line* nearly straight, but upturned on the posterior side: *hinge-plate* narrow and slight: *teeth*, none in the left valve; the right valve is imperfect: *inside* glossy: *scars* inconspicuous. L. 0.2. B. 0.4.

Station 12, 1450 fms.; two imperfect valves and a fragment.

Its delicate texture, the fewer number of ridges, and the intermediate striæ will serve to distinguish this from any known species.

Nœra angularis†, Jeffr.

SHELL inequivalve, obliquely oval, convex, thin, semi-transparent, and glossy: *sculpture* 25-30 concentric lamellar ridges on the body of the shell, besides numerous and close-set but irregular microscopic hair-like intermediate striæ; the

* Paper-like.

† Having an angle.

ridges extend to the beaks and for a short distance across the rostral part, where they disappear and are replaced by slight transverse wrinkles; the rostrum is short and separated from the body by a strong flexuous keel or longitudinal rib, which proceeds from the beak and ends below in a sharp point; there is also in some specimens another more or less distinct keel between the rostral keel and the posterior side: *colour* whitish: *margins* gently sloping downwards from the beaks, rounded on the lower part of the anterior side, curved in front, and scalloped or indented between the keels or between the rostral keel and the posterior side; the point of the rostrum is rounded: *beaks* small, incurved, but scarcely recurved: *cartilage* small, oblong, and yellow: *lumule* large, diamond-shaped: *hinge-line* obtuse-angled: *hinge-plate* slight, thicker on the anterior side near the beaks: *teeth*, none in either valve: *inside* glossy, impressed by the ridges and rostral keels: *scars* inconspicuous. L. 0.25. B. 0.35.

Station 16, 1785 fms.: fragments only. 'Porcupine' Expedition, 1870, off the coast of Portugal, 994 fms. Gulf of Mexico, "off Rebecca," 290 fms. (Pourtales)!

The above description has been taken from a living specimen which I dredged in the 'Porcupine' Expedition. The short rostrum, angulated and separated by a longitudinal keel, distinguishes this remarkable species from any of those which are also concentrically ribbed.

L.—*List of Mollusca collected by the Rev. A. E. Eaton at Spitsbergen during the third Voyage of B. Leigh Smith, Esq. Stel. Pol., in the Greenland Sea. Determined by J. Gwyn Jeffreys, F.R.S.*

Class PTEROPODA.

1. *Clione papilionacea*, Pallas. Syn. *Cl. limacina*, Phipps, &c. *Hab.* Kings Bay, &c.
2. *Limacina helicina*, Phipps. *Hab.* Common from North-Cape Island southwards, especially near the shore in bays.

Class GASTROPODA.

3. *Eolis*, sp.? *Hab.* On *Aluria esculenta*, at Fair Haven, in 4-5 fathoms.
4. *Bulla striata*, Brown. *Hab.* Near the Seven Islands.
5. *Buccinum tenerum*, Gray. *Hab.* Green Harbour.
6. *B. glaciale*, Linn. *Hab.* Magdalena Bay and Green Harbour.
7. *Admete viridula*, Müller.